

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE **PATENT**

In re Application of:)	
Vikas KRISHNA et al.)	
Serial No.: 10/044,646)	Group Art Unit: 2172
Filed: January 10, 2002)	
For: SYSTEM AND METHOD FOR)	Examiner: Hung Q. Pham
ELIMINATING DUPLICATE COPIES OF)	
ACTIVITY HISTORY LOGS IN BRIDGING)	
TWO OR MORE BACKEND DATABASE)	
SYSTEMS)	
)	

37 C.F.R. § 1.131 DECLARATION

We, the undersigned, are the Applicants for the above-identified patent application and hereby declare the following:

- 1) The pending claims of our above-identified patent application were rejected under 35 U.S.C. § 103(a) based on U.S. Patent No. 6,581,075 to Guturu et al., which is entitled "System and Method for Database Synchronization" and issued on June 17, 2003 ("Guturu"). The Guturu reference has a date of December 28, 2000.
- 2) The invention claims in the above-identified patent application were reduced to writing in the United States prior to the December 28, 2000 date of the Guturu reference. Attached hereto is the relevant portion of an Invention Disclosure on which the above-identified patent application was based. This Invention Disclosure was prepared prior to December 28, 2000.

We, the undersigned, hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Vikas Krishna

Signature:

Date: 8/13/04

Hovey Raymond Strong, Jr.

Signature:


Date: 8/13/04

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	Disclosure ARC8-2000-0212
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Required fields are marked with the asterisk (*) and must be filled in to complete the form.

Summary

Status	Under Evaluation
Processing Location	ARC
Attorney/Patent Professional	Alison Mortinger/Almaden/IBM
IDT Team	Alison Mortinger/Almaden/IBM; Susana Delgado/Almaden/IBM
Submitted Date	
Owning Division	RES
PVT Score	To calculate a PVT score, use the 'Calculate PVT' button.
Incentive Program	
Lab	
Technology Code	

Inventors with Lotus Notes IDs

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IDT Selection

IDT Team:	Alison Mortinger/Almaden/IBM Susana Delgado/Almaden/IBM
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Response Due to IRL:

Main Idea

*Title of disclosure (in English):

Method for Eliminating Duplicate Copies of Activity History Logs in Bridging Two or More Backend Database Systems

*Idea of disclosure:

1. Describe your invention, stating the problem solved (if appropriate), and indicating the advantages of using the invention.

Today, there exist very disparate database systems, like problem management systems, at various organisations. Sometimes, these systems need to be connected, i.e. bridged, to be able to

Method for Eliminating Duplicate Copies of Activity History Logs in Bridging Two or More Backend Database Systems - continued

exchange information between themselves. In doing so, there is the potential of sending across records that already exist in the other remote system and hence unnecessarily duplicating them. Described here is a method for preventing such duplication of records.

2. How does the invention solve the problem or achieve an advantage, (a description of "the invention", including figures inline as appropriate)?

The advantage achieved is that of reduced storage space by not storing duplicated records and of efficiency in sending across less amount of data by not picking up records that already exist or have already been sent to the other system. This is achieved by tagging the local copy of the data that exists in the remote system with another record that simply tells the bridging application that the records before it have a copy of each in the remote system. This way the bridging application only picks up the records that follow the tag and immediately inserts another tag marking the existence of the just sent records to also exist in the remote system, and so on.

This method has been successfully applied in bridging two IBM Tivoli Service Desk(TSD) problem management databases. These systems each have a WORK_HISTORY table that contains descriptions and notes of the work performed by a customer service representative during the life of a particular user problem. Each such record has a WORK_ID primary key. In other words, all records have a unique WORK_ID field value and it is incremented everytime a new record is inserted into the WORK_HISTORY table. All records are kept in sequence and can be sorted by WORK_IDs. Whenever the bridging application picks up the newly added WORK_HISTORY logs(records) from a database, it inserts into the table a new record with a description of 'copy in the sent-to-system'. This tells the bridge that any records with WORK_IDs prior in sequence to the WORK_ID of this tag record has been sent to the remote system and hence a copy of these records will now exist there as well. When the next time the entire problem view is to be sent across, the bridge will only pick up records that have a WORK_ID greater than the greatest WORK_ID belonging to a record containing the description of 'copy in the sent-to-system'. Similarly, the bridging application also inserts a tag record in the remote system after it inserts the sent records, marking all the records prior to this tag record(in terms of WORK_IDs) as existing in the system they were sent from.

3. If the same advantage or problem has been identified by others (inside/outside IBM), how have those others solved it and does your solution differ and why is it better?

There have been similar attempts to eliminate duplication of records by using timestamps of records and sending only those across that have a timestamp greater than that of a certain cached value(the value being the timestamp at which the records were last sent). This has a disadvantage of requiring the bridging application to store a threshold timestamp and hence maintain state that can slow down the application as it has to write to disk from time to time. It also has a potential problem as timestamps are usually not absolute and mostly relative. So if the two systems being bridged were physically in two different timezones, then meaning of a timestamp can be confusing to the bridging application and hence erroneous in the goal of eliminating duplicate records. Also, someone can inadvertently or maliciously change the time on the bridging application machine at a certain point of time which will cause the Bridge to use a wrong threshold timestamp to judge which WORK_HISTORY records to send across.

4. If the invention is implemented in a product or prototype, include technical details, purpose, disclosure details to others and the date of that implementation.

This algorithm has been implemented in an XML Bridge application between two TSD systems as of
It is currently() undergoing system test and will be shipped as part of
the e-ESM 6.0 around mid

*Critical Questions (Questions 1 - 7 must be answered)

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